SANTA CRUZ BIOTECHNOLOGY, INC.

D8S2298E siRNA (h): sc-77439

BACKGROUND

Ubiquitin (Ub) is a highly conserved protein in eukaryotic cells. Ubiquitination is utilized in cells to control the stability, function and subcellular localization of proteins. Many cellular processes are regulated by ubiquitination, which requires high substrate specificity of the ubiquitination machinery as well as the existence of diverse downstream effector proteins interacting with ubiquitinated substrates. Most of these cellular effectors are characterized by a modular composition of ubiquitin-binding motifs and further domains mediating specific functions. The most highly characterized ubiquitin-related protein motifs include the UBA, UIM, UBD and UBX domains. D8S2298E, also designated UBX domain-containing protein 8 (UBXN8), UBX domain-containing protein 6 (UBXD6) or Reproduction 8 protein (REP-8), is a 270 amino acid protein that is expressed as three isoforms due to alternative splicing events. D8S2298E is expressed in testis and ovary, as well as during early and late embryonic stages, implicating a role for D8S2298E in reproduction and embryogenesis.

REFERENCES

1. Ciechanover, A. 1994. The ubiquitin-proteasome proteolytic pathway. Cell 79: 13-21.
2. Ciechanover, A., et al. 1994. The ubiquitin-mediated proteolytic pathway: mechanisms of recognition of the proteolytic substrate and involvement in the degradation of native cellular proteins. FASEB J. 8: 182-191.
3. Hochstrasser, M. 1995. Ubiquitin, proteasomes, and the regulation of intracellular protein degradation. Curr. Opin. Cell Biol. 7: 215-223.
4. Jennissen, H.P. 1995. Ubiquitin and the enigma of intracellular protein degradation. Eur. J. Biochem. 231: 1-30.
5. Pagano, M., et al. 1995. Role of the ubiquitin-proteasome pathway in regulating abundance of the cyclin-dependent kinase inhibitor p27. Science 269: 682-685.
6. Yamabe, Y., et al. 1997. Cloning and characterization of Rep-8 (D8S2298E) in the human chromosome 8p11.2-p12. Genomics 39: 198-204.
7. Yamabe, Y., et al. 1999. Structures of mouse Rep-8 cDNA and genomic clones. Gene 227: 39-47.

CHROMOSOMAL LOCATION

Genetic locus: UBXN8 (human) mapping to 8p12.

PRODUCT

D8S2298E siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see D8S2298E shRNA Plasmid (h): sc-77439-SH and D8S2298E shRNA (h) Lentiviral Particles: sc-77439-V as alternate gene silencing products.

For independent verification of D8S2298E (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-77439A, sc-77439B and sc-77439C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

D8S2298E siRNA (h) is recommended for the inhibition of D8S2298E expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor D8S2298E gene expression knockdown using RT-PCR Primer: D8S2298E (h)-PR: sc-77439-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.